

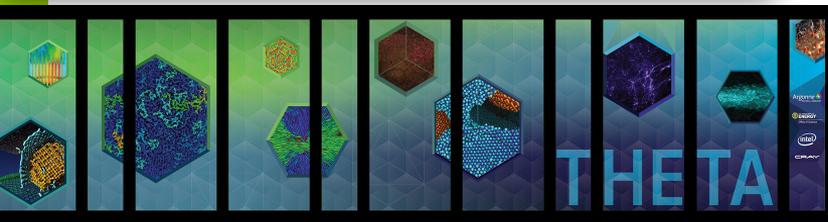
LEADERSHIP COMPUTING ALLOCATION PROGRAMS

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Director of Science, ALCF



LEADERSHIP COMPUTING MISSION

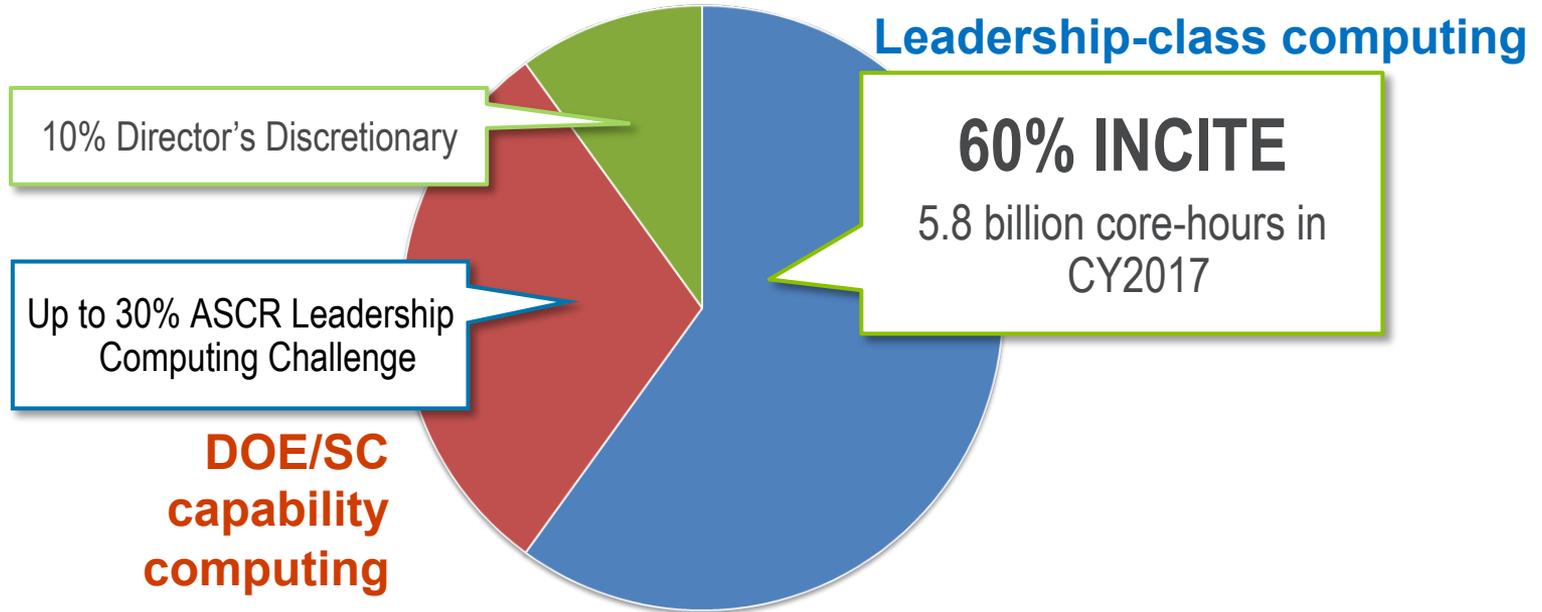


Leadership Class Resources

- Accelerate major scientific discoveries and engineering breakthroughs
- Cultivate HPC environment for computational science
- Dedicated to open science
- Two diverse architectures
 - ALCF & OLCF
 - Two of the worlds most powerful computers
- Supported by DOE's Advanced Scientific Computing Research Program (ASCR)

THREE PRIMARY WAYS FOR ACCESS TO LCF

DISTRIBUTION OF ALLOCABLE HOURS



WHAT IS INCITE?



Innovative and Novel Computational Impact on Theory and Experiment

INCITE promotes transformational advances in science and technology through large allocations of computer time, supporting resources, and data storage at the Argonne and Oak Ridge Leadership Computing Facilities (LCFs) for computationally intensive, large-scale research projects.



LCF Allocation Programs	INCITE 60%	ALCC 30%	Director's Discretionary 10%
Mission	High-risk, high-payoff science that requires LCF-scale resources*	High-risk, high-payoff science aligned with DOE mission	Strategic LCF goals
Call	1x/year – (Closes June) <i>2018 Call Open</i>	1x/year – Closes February	Rolling
Duration	1-3 years, yearly renewal	1 year	3m,6m,1 year
Typical Size	30 - 40 projects 75M - 500M core-hours/yr.	10-30 projects 10M – 300+M core-hours/yr.	~100 of projects .5M – 10M core-hours
Total Hours	>5 billion core-hours (~3.5B Mira, ~465M Theta, ALCF)	~2.5 billion core-hours (~1.75 ALCF)	~590 million ALCF
Review Process	Scientific Peer-Review Computational Readiness	Scientific Peer-Review Computational Readiness	Strategic impact and feasibility
Managed By	INCITE management committee (ALCF & OLCF)	DOE Office of Science	LCF management
Readiness	High	Medium to High	Low to High
Availability	Open to all scientific researchers and organizations Capability > 131,072 cores (16.7% of Mira)		

INCITE CRITERIA

ACCESS ON A COMPETITIVE, MERIT-REVIEWED BASIS*

1 Merit criterion

Research campaign with the potential for significant domain and/or community impact

2 Computational leadership criterion

Computationally demanding runs that cannot be done anywhere else: *capability, architectural needs*

3 Eligibility criterion

- Grant allocations **regardless of funding source***
- Non-US-based researchers are welcome to apply

*DOE High-End Computing Revitalization Act of 2004:
Public Law 108-423

TWOFOLD REVIEW PROCESS

	New proposal assessment	Renewal assessment
1	Peer review: INCITE panels <ul style="list-style-type: none">• Scientific and/or technical merit• Appropriateness of proposal method, milestones given• Team qualifications• Reasonableness of requested resources	<ul style="list-style-type: none">• Change in scope• Met milestones• On track to meet future milestones• Scientific and/or technical merit
2	Computational readiness review: LCF centers <ul style="list-style-type: none">• Technical readiness• Appropriateness for requested resources	<ul style="list-style-type: none">• Met technical/computational milestones• On track to meet future milestones
	Award Decisions <ul style="list-style-type: none">• INCITE Awards Committee comprised of LCF directors, INCITE program manager, LCF directors of science, sr. management	

2017 INCITE AWARD STATISTICS

- Request for Information helped attract new projects
- Call closed June 24th, 2016
- Total requests of more than **13 billion core-hours**
- Awards of 5.8 billion core-hours for CY 2017
- **55 projects awarded of which 17 are renewals**

Acceptance rates

45% of nonrenewal submittals and 85% of renewals

Contact information

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2017 AWARD STATISTICS, BY SYSTEM

	Titan	Mira
Number of projects*	31	30
Average Project	72.6M	117.7M
Median Project	75M	100M
Total Awards (core-hrs in CY2016)	2.25B	3.53B

* Total of 55 INCITE projects (many of the projects received time on both Mira and Titan)

NEW PROPOSALS,* NEW PI'S

*EXCLUDING RENEWAL SUBMITTALS

- 47% of the PI's had never before led an INCITE proposal
 - 85 new proposals, 40 led by new PI's
- 34% of non-renewal projects awarded time led by new PI's
 - 38 new projects awarded, 13 led by new PI's

INCITE actively engages with new research teams through outreach such as workshops, email distributions, and individual networking.

QUESTIONS